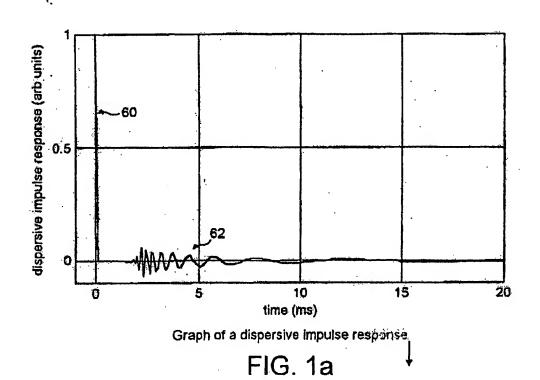
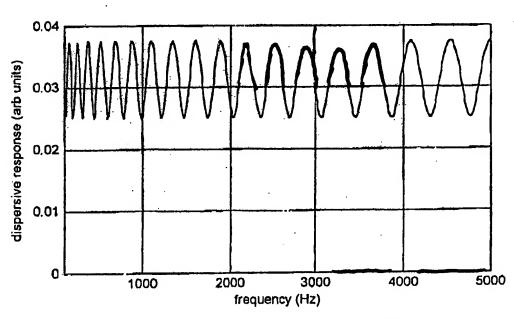
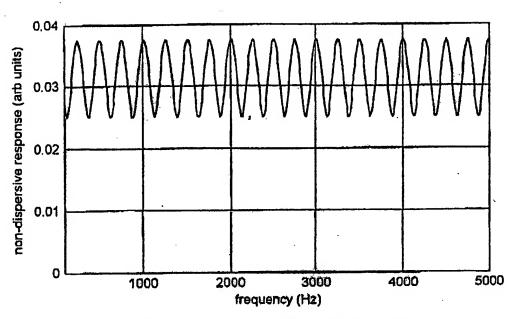
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Graph of a dispersive frequency response FIG. 1b

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Graph of a non-dispersive fraquency response

FIG. 1c

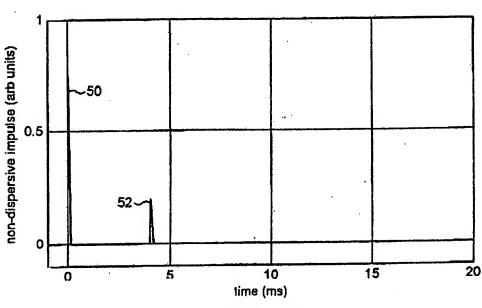
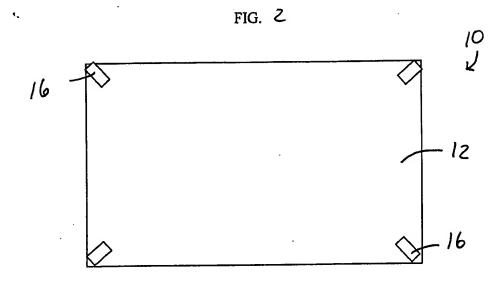
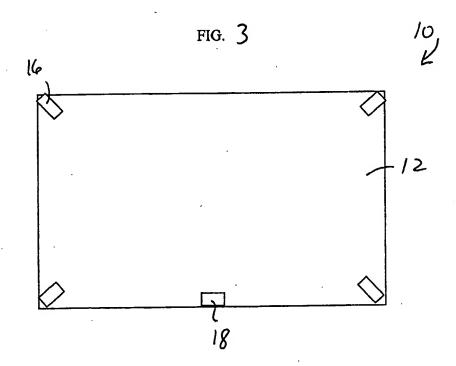


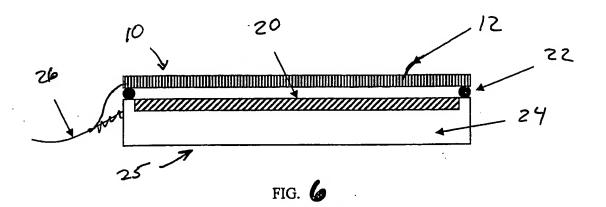
FIG. 1d

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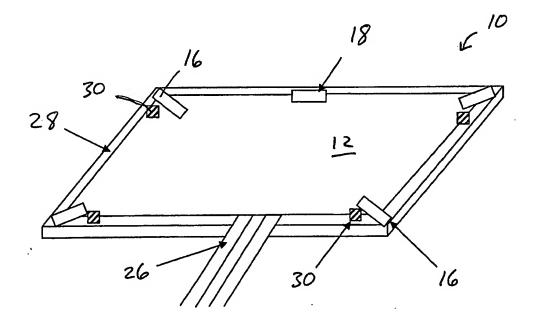
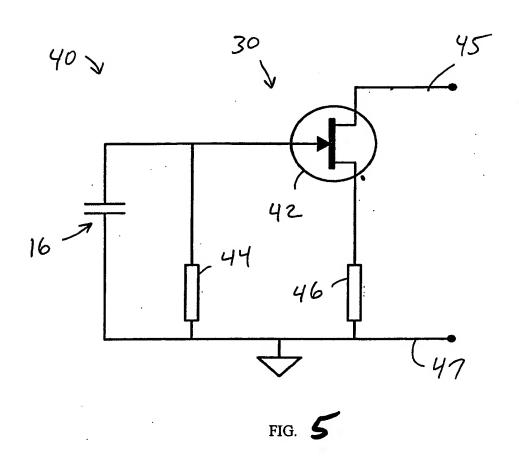
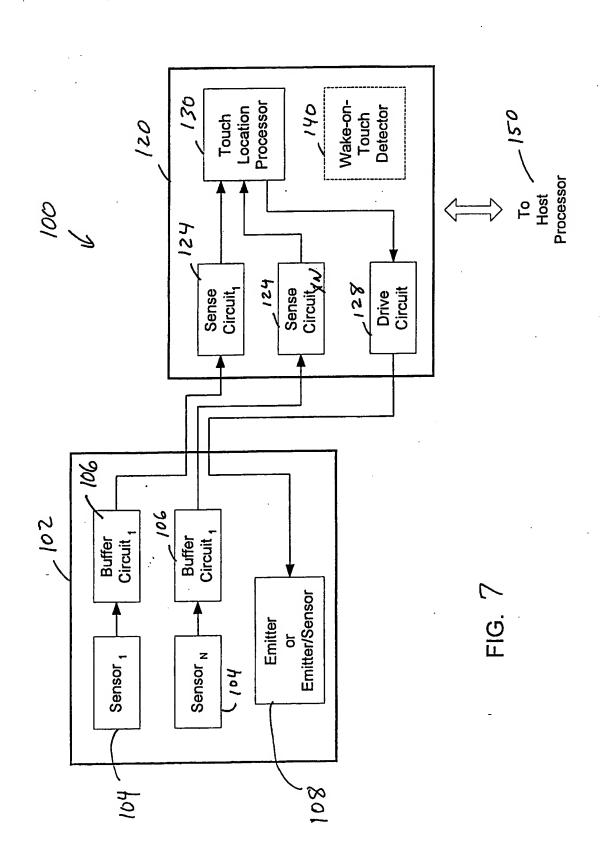


FIG. 4

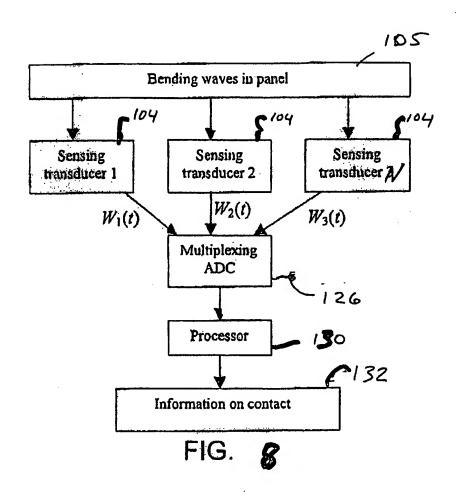
First Named Inventor: Nicholas P. R. Hill et al. Case No.: 59377US002



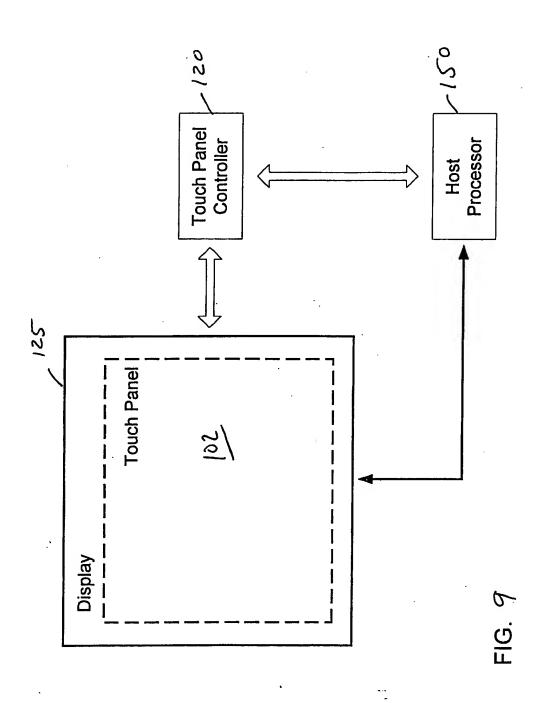
Case No.: 59377US002



Case No.: 59377US002



First Named Inventor: Nicholas P. R. Hill et al. Case No.: 59377US002



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10 FIG. 5B 104 108 102 105 Contolo 202 120 <del>-200</del> TOUCH DANEL Controller **Electronics** 206 140 222 Main Processor Wake-On-Touch Circuitry Detector 208 Other System or I/O Processor Peripheral 209 224 204

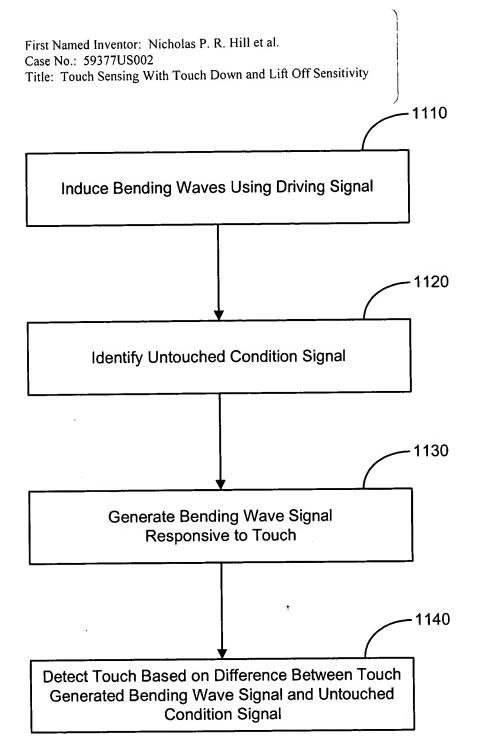


Figure 11A

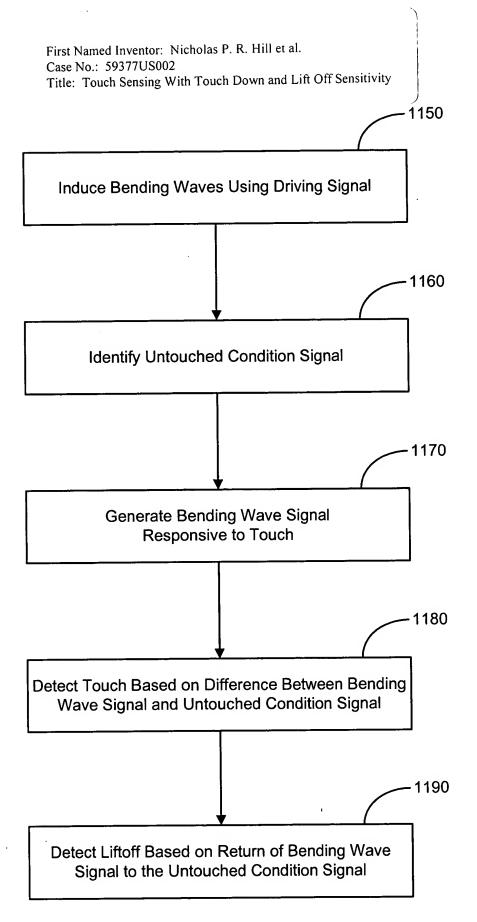


Figure 11B

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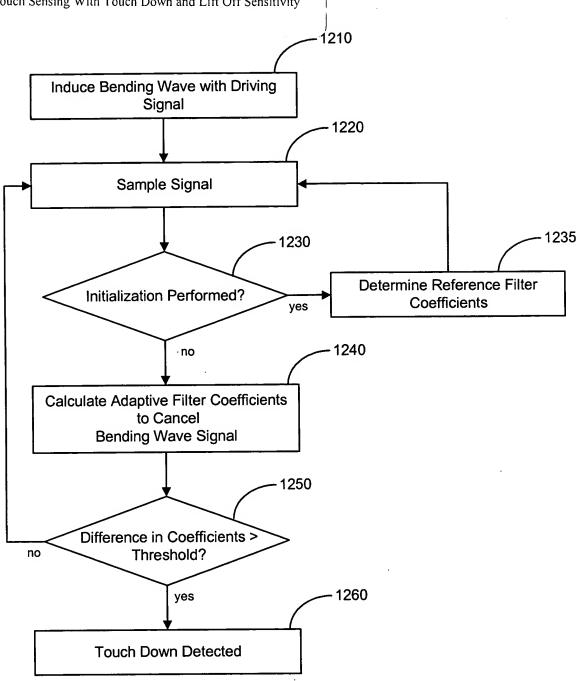
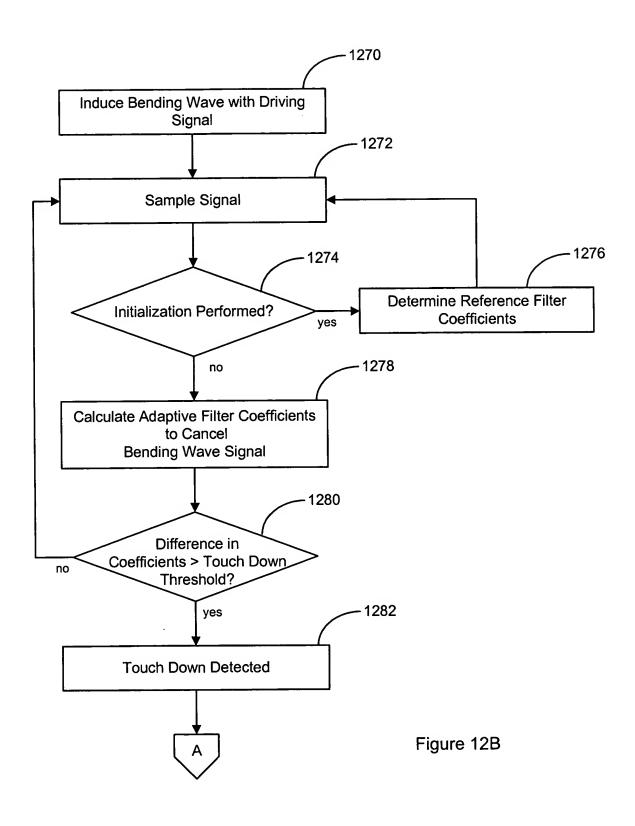


Figure 12A



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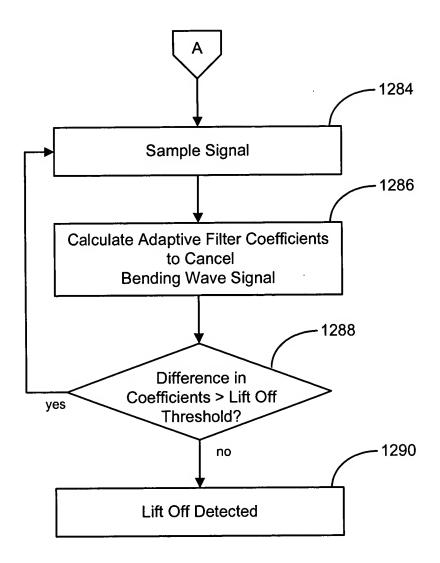
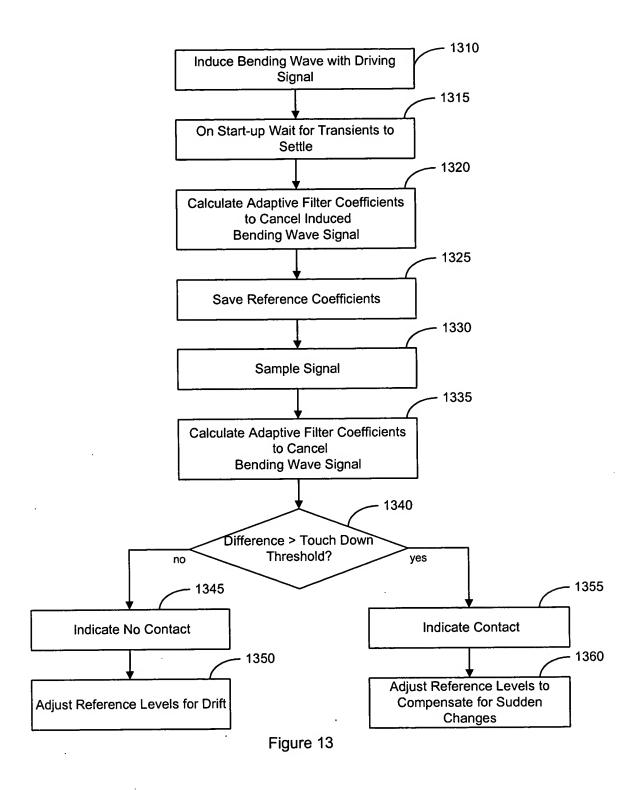


Figure 12C

Case No.: 59377US002



Case No.: 59377US002

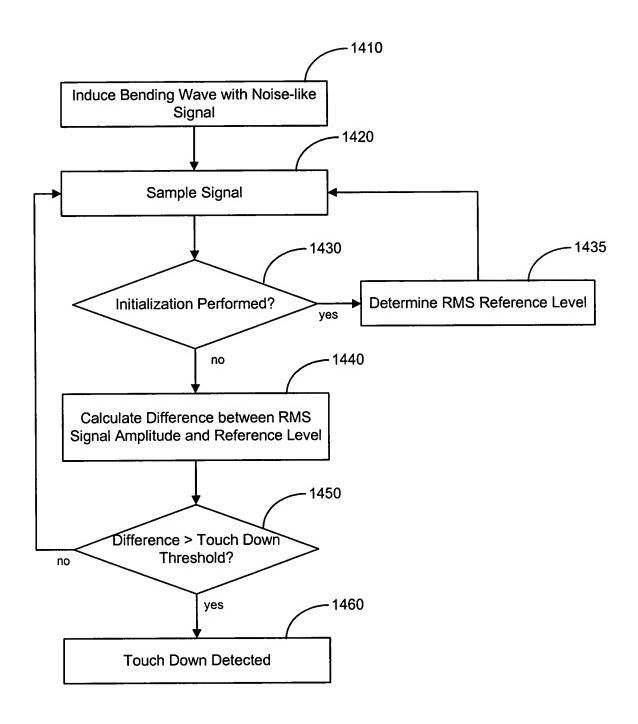
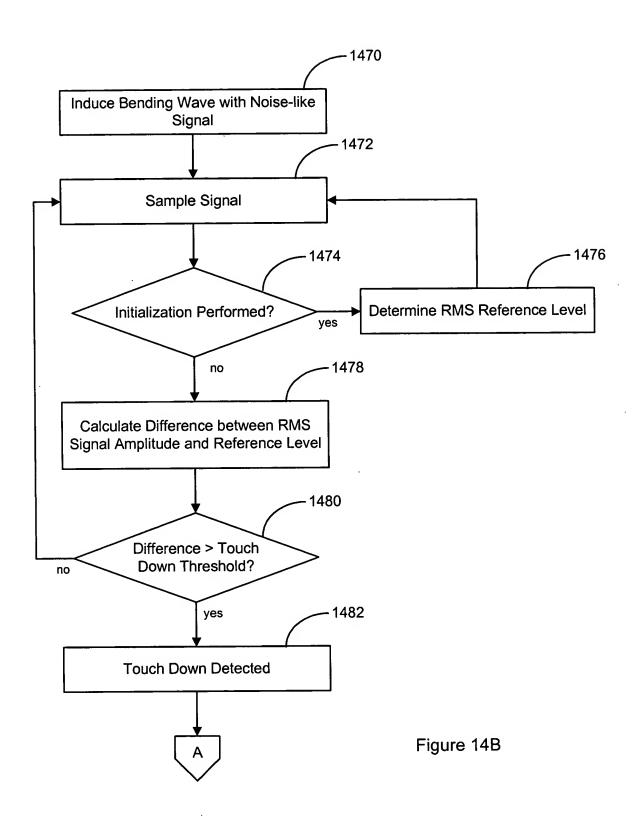


Figure 14A

Case No.: 59377US002



Case No.: 59377US002

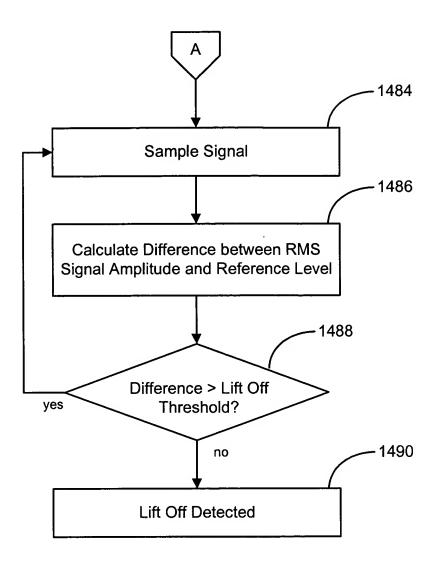
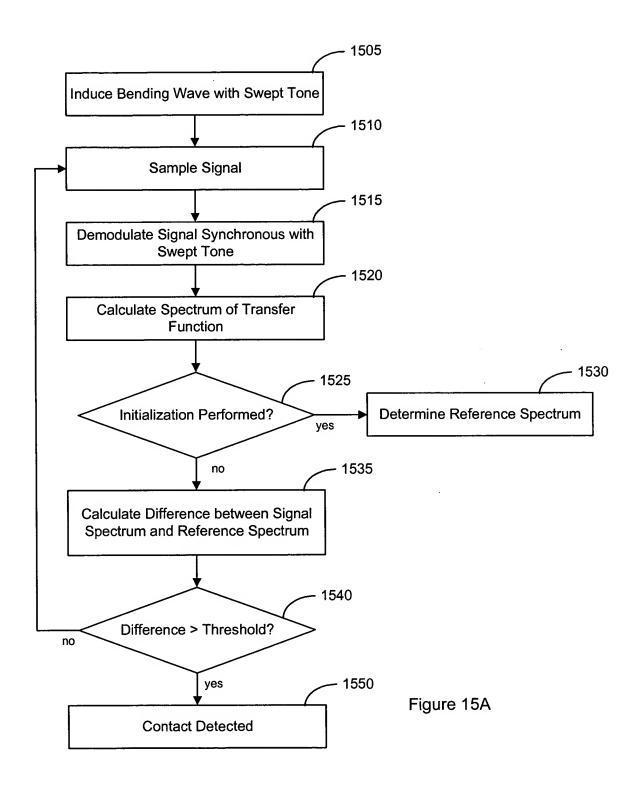
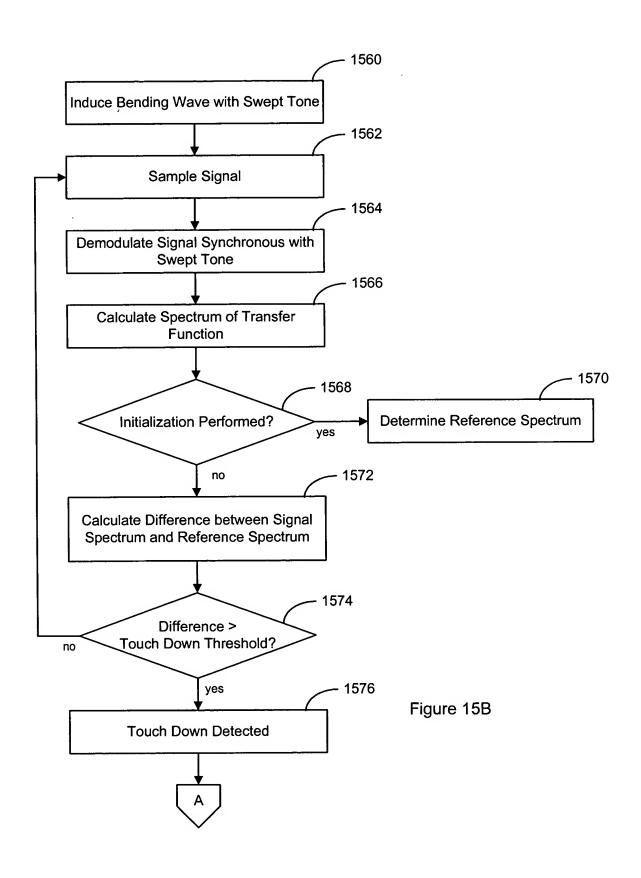


Figure 14C

Case No.: 59377US002



Case No.: 59377US002



Case No.: 59377US002

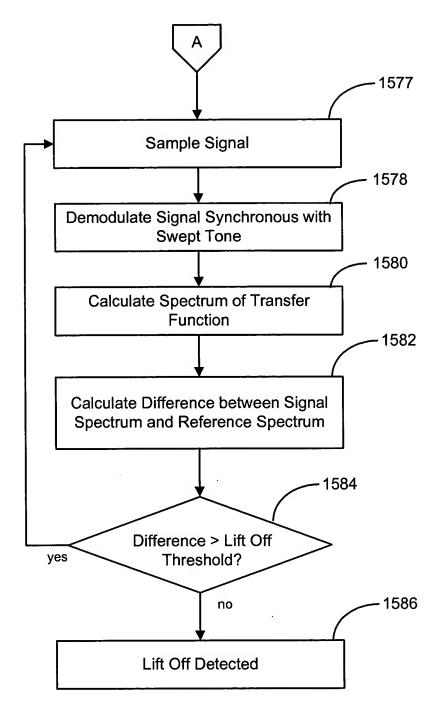


Figure 15C

Case No.: 59377US002

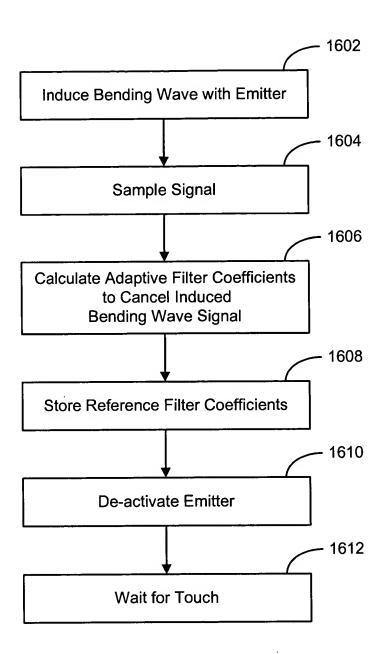


Figure 16A

Case No.: 59377US002

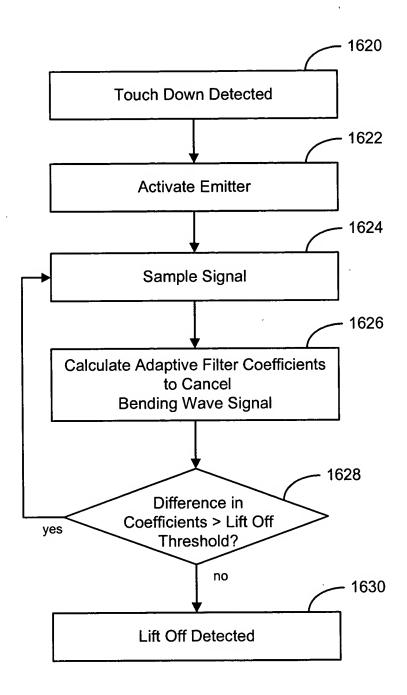


Figure 16B

Case No.: 59377US002

1755 -Title: Touch Sensing With Touch Down and Lift Off Sensitivity First Named Inventor: Nicholas P. R. Hill et al. .1720 Notch Filter at Signal at 50kHz Notch Filtered Data Tested for Case No.: 59377US002 Threshold Crossing Trigger **Event for Touch Down** 1710 **Band Pass Filter** Signal at 50kHz Sample Signal

Notch Filtered Data Location Algorithm Location Algorithm Applied to Touch **Trigger Contact** Figure 17 1760 -1750 Determined from One of Trigger Trigger Time Indicators -1735 Difference in Filter Coefficients from Reference Coefficients Error Above a Threshold Indicates Touch Down Indicates Touch Down 1740 1730 with Adaptive Filter Cancel Bending Calculate Error Calculate Filter Coefficients to Wave Signal